AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows and cancel without prejudice claims marked as cancelled:

1. (Original) A dielectric resonator antenna comprising a dielectric resonator having a substantially planar longitudinal surface and a grounded substrate having first and second opposed surfaces with a dielectric substrate adjacent to the second surface, wherein:

i) the grounded substrate includes a slot extending longitudinally in a first direction and having a predetermined width;

ii) the dielectric resonator is arranged such that its longitudinal surface is disposed close to the first surface of the grounded substrate with a gap between the surfaces, and with an end region of the longitudinal surface overlying the width of the slot;

iii) a majority of the longitudinal surface of the dielectric resonator is provided with a conductive layer, the end region of the longitudinal surface being free of the conductive layer; and

iv) a strip feed line is provided on the dielectric substrate on the second surface of the grounded substrate, the strip feed line being substantially coextensive with the longitudinal surface of the dielectric resonator and extending beyond the width of the slot in the grounded substrate.

2. (Original) An antenna as claimed in claim 1, wherein the antenna resonates in an $EH_{11\delta}$ mode during operation thereof.

3. (Previously presented) An antenna as claimed in claim 1, wherein the dielectric resonator has a half cylindrical configuration with a rectangular basal surface thereof being the longitudinal surface.

4. (Previously presented) An antenna as claimed in claim 1, wherein the dielectric resonator is formed from a half cylindrical dielectric resonator with a rectangular basal surface thereof being the longitudinal surface and a surface opposed to the rectangular basal surface being flattened so as to form a plateau.

5. (Previously presented) An antenna as claimed in claim 1, wherein the dielectric resonator has an oblong configuration with a rectangular basal surface thereof being the longitudinal surface.

6. (Previously presented) An antenna as claimed in claim 1, wherein the dielectric resonator has a triangular prismatic configuration with a rectangular basal surface thereof being the longitudinal surface.

7. (Previously presented) An antenna as claimed in claim 1, wherein the dielectric resonator is formed from a triangular prismatic dielectric resonator with a rectangular basal surface thereof being the longitudinal surface and a surface opposed to the rectangular basal surface being flattened so as to form a plateau.

8. (Previously presented) An antenna as claimed in claim 1, wherein the conductive layer includes a metallised paint.

9. (Previously presented) An antenna as claimed in claim 1, wherein the longitudinal surface of the dielectric resonator is adhered to the grounded substrate with an adhesive loaded with a conductive material, the adhesive defining the gap between the surfaces.

10. (Previously presented) A method of manufacturing a dielectric resonator antenna, the antenna comprising a dielectric resonator having a substantially planar longitudinal surface and a grounded substrate having first and second opposed surfaces with a dielectric substrate adjacent to the second surface, the method comprising:

forming a slot in the grounded substrate, the slot extending longitudinally in a first direction and having a predetermined width;

providing a strip feed line on the dielectric substrate on the second surface of the grounded substrate, the strip feed line being generally perpendicular to the slot in the grounded substrate and having one end that extends beyond the width of the slot;

coating a conductive layer onto a majority of the longitudinal surface of the dielectric resonator, leaving an end region of the longitudinal surface free of the conductive layer;

arranging the dielectric resonator such that its longitudinal surface is disposed close to the first surface of the grounded substrate with a gap between the surfaces, and with the end region of the longitudinal surface overlying the width of the slot;

connecting the dielectric resonator to a resonance analyser and moving the dielectric resonator about over the first surface of the grounded substrate until a resonance position is found where a predetermined resonance mode is detected by the resonance analyser;

adhering the longitudinal surface of the dielectric resonator to the first surface of the grounded substrate in the resonance position with an adhesive laden with a conductive material; and

trimming the end of the strip feed line extending beyond the slot in the grounded substrate until the predetermined resonance mode measured by the resonance analyser predominates over other possible resonance modes.

11. (Original) A method according to claim 10, wherein the predetermined resonance mode is an $EH_{11\delta}$ resonance mode.

12. (Previously presented) A method according to claim 10, wherein the dielectric resonator has a half cylindrical configuration with a rectangular basal surface and a curved surface, the rectangular basal surface being the longitudinal surface.

13. (Original) A method according to claim 12, wherein the curved surface of the dielectric resonator is flattened so as to form a plateau.

14. (Previously presented) A method according to claim 10, wherein the dielectric resonator has a triangular prismatic configuration with a rectangular basal surface and an apex opposed to rectangular basal surface, the rectangular basal surface being the longitudinal surface.

15. (Original) A method according to claim 14, wherein the apex of the dielectric resonator is flattened so as to form a plateau.

16. (Previously presented) A method according to claim 10, wherein the dielectric resonator has an oblong configuration with a rectangular basal surface, the rectangular basal surface being the longitudinal surface.

17. (Previously presented) A method according to claim 10, wherein the conductive layer is applied as a metallised paint.

18. (Previously presented) A method according to claim 10, wherein the resonance analyser is a vector network analyser.

19. (Previously presented) A method according to claim 10, wherein the curved surface or apex of the dielectric resonator is flattened by grinding or filing so as to increase a resonant frequency of the antenna.

20. (Currently amended) A dielectric resonator antenna comprising a dielectric resonator having a substantially planar longitudinal surface, a dielectric substrate having first and

second opposed surfaces with a conductive groundplane being provided on the second surface and a direct microstrip feedline being provided on the first surface so as to extend longitudinally therealong, the dielectric resonator being mounted on the first surface such that the planar longitudinal surface of the dielectric resonator contacts the direct microstrip feedline and is coextensive therewith, wherein substantially all of the longitudinal planar surface of the dielectric resonator is provided with a conductive layer.

21. (Original) An antenna as claimed in claim 20, wherein the direct microstrip feedline extends beyond the longitudinal surface of the dielectric resonator along the first surface of the dielectric substrate so as to provide an overhang.

22. (Original) An antenna as claimed in claim 21, wherein the overhang curves in a plane of the dielectric substrate.

23. (Original) An antenna as claimed in claim 21, wherein the overhang is substantially straight.

24. (Cancelled)

25. (Cancelled)

26. (Previously presented) An antenna as claimed in claim 23, wherein the conductive layer is a metallised paint.

27. (Currently amended) ~~An antenna as claimed in claim 20~~ A dielectric resonator antenna comprising a dielectric resonator having a substantially planar longitudinal surface, a dielectric substrate having first and second opposed surfaces with a conductive groundplane being provided on the second surface and a direct microstrip feedline being provided on the first surface so as to extend longitudinally therealong, the dielectric resonator being mounted on the first surface such that the planar longitudinal surface of the dielectric resonator

contacts the direct microstrip feedline and is coextensive therewith, wherein the antenna resonates in an EH mode during operation thereof.

28. (Previously presented) An array of dielectric resonator antennas as claimed in claim 1, the antennas being arranged in the array such that the longitudinal surfaces of the dielectric resonators are substantially colinear.

29. (Original) An array as claimed in claim 28, wherein the longitudinal surfaces are aligned in a direction generally perpendicular to a given terrestrial ground plane.

30. (Original) An array as claimed in claim 29, wherein the array generates a radiation pattern with vertical polarisation.

31. (New) A dielectric resonator antenna comprising a dielectric resonator having a substantially planar longitudinal surface, a dielectric substrate having first and second opposed surfaces with a conductive groundplane being provided on the second surface and a direct microstrip feedline being provided on the first surface so as to extend longitudinally therealong, the dielectric resonator being mounted on the first surface such that the planar longitudinal surface of the dielectric resonator contacts the direct microstrip feedline and is coextensive therewith, wherein only a part of the longitudinal planar surface of the dielectric resonator that contacts the direct microstrip feedline is provided with a conductive layer.